

Appl. No. 09/901,894
Amdt. dat d May 11, 2004
Reply to Office Action of November 12, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A data acquisition system for collecting and storing oil/gas production data from a plurality of geographically separated oil/gas production wells and for monitoring and controlling oil/gas well production and pumping equipment at individual oil/gas production wells, the data acquisition system comprising:

a data collection and control device adapted for [and operatively connected] operative connection to individual geographically separated oil/gas well production and pumping equipment for collecting production data from individual oil/gas production wells, for collecting operating data of the oil/gas well production and pumping equipment and for controlling the individual oil/gas well production and pumping equipment;

wherein the data collection and control device includes a processor for receiving the production and operating data of the individual oil/gas well production and pumping equipment, for providing instructions to the individual oil/gas well production and pumping equipment and for reporting the individual production and operating data to a computer via a wired or wireless interface;

wherein the data collection and control device includes data storage memory operatively connected to the processor for storing production and operating data prior to reporting to the computer.

2. (currently amended) A data acquisition system as in claim 1 wherein the data acquisition system includes the computer and the computer is any one of or a combination of a central computer in operative connection with a plurality of data collection and control devices each connected to respective oil/gas production wells or a portable computer adapted for operative connection to a data collection and control device at an individual oil/gas well.

3. (previously presented) A data acquisition system as in claim 1 wherein the data collection and control device further includes an operator input system for receiving commands from an operator and a display system for displaying processed or unprocessed production data and operating parameters of the pumping system.

4. (previously presented) A data acquisition system as in claim 1 wherein the data collection and control device further includes any one of or a combination of a digital or analog input/output device operatively connected to the processor and wherein the digital and/or analog output devices are for operative connection to one or more production sensors or controls at an individual oil/gas well.

5. (cancelled)

6. (previously presented) A data acquisition system as in claim 2 wherein the computer includes software having a central management module for managing the collection, analysis and reporting of production data from data collection and control devices.

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7. (previously presented) A data acquisition system as in claim 6 wherein the central management module is operatively connected to a communication interface for sending and receiving data to and from the data collection and control device.

8. (previously presented) A data acquisition system as in claim 7 wherein the central management module includes a control module for sending control instructions to the data collection and control device.

9. (previously presented) A data acquisition system as in claim 2 wherein the data collection and control device includes an operator input system for receiving commands from an operator and a display system for displaying processed or unprocessed production data and operating parameters of the pumping system.

10. (previously presented) A data acquisition system as in claim 9 wherein the data collection and control device includes any one of or a combination of a digital or analog input/output device operatively connected to the processor and wherein the digital and/or analog output devices are for operative connection to one or more production sensors or controls at an individual oil/gas well.

11. (cancelled).

12. (previously presented) A data acquisition system as in claim 11 wherein the computer includes software having a central management module for managing the collection, analysis and reporting of production data from data collection devices.

13. (previously presented) A data acquisition system as in claim 12 wherein the central management module is operatively connected to a communication interface for sending and receiving data to and from the data collection and control device.

14. (previously presented) A data acquisition system as in claim 13 wherein the central management module includes a control module for sending control instructions to the production controls through the data collection and control device.

15. (previously presented) A data acquisition system for collecting data from at least one oil/gas production well comprising:

a data collection and control device adapted for operative connection [and operatively connected] to oil/gas well production equipment for obtaining and storing production data from an oil/gas production well and for providing control instructions to the production equipment;

a central computer operatively connected to the data collection and control device for receiving production data from the data collection and control device and for sending control instructions to the production equipment via a wired or wireless interface wherein the central computer includes:

a management module for managing the collection, analysis and reporting of oil/gas well production data from the data collection and control device;

an oil/gas well production data database;

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a wired or wireless interface;

a reporting module for formatting reports from the oil/gas well production data database; and,

a graphical display module for displaying production data from the oil/gas well production data database.

16. (currently amended) A method of collecting data from an oil/gas production well comprising the steps of:

a) operatively connecting a data collection and control device to oil/gas well production equipment at a well; [and,]

b) storing oil/gas well data at the oil/gas well; and,

[b)] c) uploading production data from the data collection and control device via a wired or wireless link to a computer.

17. (previously presented) A method as in claim 16 further comprising the step of sending a control instruction to the oil/gas well production equipment from the central or portable computer.

18. (previously presented) A data acquisition system as in claim 1 wherein the processor automatically adjusts the oil/gas well production and pumping equipment in response to oil/gas well production and operating data from an individual oil/gas well.

19. (new) A data acquisition system wherein the central computer and data collection and control device are operatively connected by a combination of or a combination of a public switched telephone, a cellular telephone, a satellite communication network or the Internet.